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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,565	OUCHI, MAKOTO	
	Examiner	Art Unit	
	MEKONEN BEKELE	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _03 June 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _03/29/2007_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-19 are pending in this application.

Information Disclosure Statement

2. The information disclosure statements field on 03/29/2007 is in compliance with the provisions of 37 CFR 1.97, and has been considered and copies are enclosed with this Office Action.

Priority

3. Acknowledgement is made of application's claim for foreign priority under 35 U.S.C. 119 (a)-(d) based on the Japanese Patent Application No. 2002-353790, filed on 12/05/2002. The certified copy has been filed in parent application 10537565, filed on 06/03/2005.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 16 and 18 rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101" – publicly available at USPTO.GOV, "memorandum to examining corp"). The instant claims neither transform underlying subject matter nor positively

tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. The method including: an image data acquiring step, an edge pixel detecting step, characteristic point extracting step, an arrangement pattern data creating step and characteristic region defining step. The applicant has provide no explicit and deliberate definition of “acquiring”, extracting” or “detecting” to exclude steps completely performed mentally, verbally or without a machine. In order for a process to be “tied” to another statutory category, the structure of another statutory category should be positively recited in a step or steps significant to the basic inventive concept, and NOT just in association with statements of intended use or purpose, insignificant pre or post solution activity, or implicitly. The method claims 16 and 18 including the step of generating is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.

Claim Rejections - 35 USC § 103

The following is a quotation of the 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained thought the invention is not identically disclosed or described as set forth in section 102 of this title, if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-8, and 13-19 are rejected under 35 U.S.C 103 as being unpatentable over Peregrim et al.(hereafter Peregrim), US patent No. 5027422, published , 25/06/1991, in view of Higure Masaki (hereafter Higure), Japanese Patent Publication No. 11-185018, published on 07/09/1999.

As to claims 1 and 16, Peregrim teaches A characteristic region extracting device (**Abstract: edge extraction based confirmed boundary pattern matching device)** which comprise:

an image data acquiring unit to acquire image data representing an image**(Fig.2, elements 22A and 22B, the non coherent integrator 22A and 22B acquires and analyze a reference image and a radar scene image that come from target designator 119 (Fig.1) and the Synthetic Aperture Radar (SAR) respectively)** with pixels (**col. 2 lines 27-28, sub-array pixels of an image**) arranged in a dot matrix pattern**(col. 4 lines 62-64 col. 1 lines 24-26, the image might be represented in any of a number of ways. The SAR image is divided into a two-dimensional array of pixels, each represented by a digital word.** The dot matrix pattern **corresponds to the two-dimensional array of pixels. Since the dot matrix pattern represent digitalized or quantized image),**

an edge pixel detecting unit to detect the edge pixels of the image according to the image data(**Fig. 2 element 28 and 30, col.6 lines 65-68, col. 7 lines1-5, Fig. 2 shows local edge detector 28 and global edge detector 30. As shown in Fig. 2 the filtered image is processed by these two edge detectors. Each produces an edge map. The edge maps are represented as arrays of digital words),**

a characteristic point extracting unit to extract the edge pixel as the characteristic point (**Fig. 2 element 32: edge extractor**, **col.7 lines 8-10, the edge extractor 32 combines both edge maps, using information from the filtered image, into a confirmed edge map)** when a pattern formed by the detected edge pixels (**Fig. 2 element 32, col.13 lines 48-58, the output of edge extractor 32 (FIG. 2) consists of an array of pixels denoted EEB(i,j). Each pixel has a value of either 1, indicating an edge, or 0, indicating no edge. Thus, the edge extractor 32 generates a pattern of 0 and 1 as output)**and their neighboring pixels(**col.13**

lines 59-67, col.14 lines 1-10, Peregrim specifically teaches a decision block 184 that compare a selected pixel and its four nearest neighboring pixels to determine whether the selected pixel an edge pixel or not) is similar to a prescribed object to be extracted**(Fig. 2 element 22B,col.17 lines 16-20**, **the output image of the non-coherent integrator 22B is compared to the output of the reference template generator using edge template correlator 42 to determine the best match between the template to target area image formed by SAR 18B.** The prescribed object to be extracted **corresponds to target area image formed by SAR 18B),** and

` However it is noted that Peregrim does not specifically teach "a characteristic region defining unit to define as the characteristic region the prescribed region in the image which has the extracted characteristic points in large number" **although Peregrim suggests the edge template correlator 42 begins at processing block 300 (Fig. 8A) which selects a local window in the target area image produced by SAR 18B. (Col.17 lines 28-30, and when the processing in FIG. 8 is completed, the largest value of correlation map CM has been identified by processing block 324. The largest value of CM implies that the template best matches the local window in the target area image used to compute that value of CM) ((col.18 lines 59-65).**

On the other hand the image processing device which performs alignment processing between two or more pictures which taken at almost same composition by a different photographing condition of Higure teaches a characteristic region defining unit to define as the characteristic region the prescribed region in the image which has the extracted characteristic points in large number (**Drawing 3, Drawing 6, claim 1, page 18 [0029],** the characteristic region defining unit **corresponds to the seek-area setting-out means.** The extracted

characteristic points **correspond to characteristic quantity of the picture, where the edge detection result preferred as characteristic quantity ([0030]).**

It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the image processing method which performs alignment processing between two or more pictures of the same scene of Higure (abstract) into the method of aligning two images of the same scene by matching features in a first image to features in a second image of Peregrim(abstract), because that would have allowed user of Peregrim to define the matching features more accurately using the seek- area setting out means which divide the images into two or more region divisions, and provide a seek areas showing the features of the images in said each region division(page 6[0014], Fig.3).

As to claim 2, Peregrim teaches the characteristic point extracting unit is a dot-matrix filter formed with the filter value indicating the edge pixel and the filter value indicating the non-edge pixel**(col.13 lines 48-58, the output of edge extractor 32 (FIG. 2) consists of an array of pixels denoted EEB(i,j). Each pixel has a value of either 1, indicating an edge, or 0, indicating no edge. Since the Dot- matrix data is composed of 1 and 0, the edge extractor 32 generates a dot- matrix as output.** The filter values **corresponds the binary value 1 and 0),** so that it compares more than one filter forming a pattern by the arrangement of each filter value with the edge detecting data **(col.13 lines59-67, col.14 lines 1-10, Peregrim specifically teaches a decision block 184 that compare a selected pixel and its four nearest neighboring pixels to determine whether the selected pixel an edge pixel or not. The four nearest neighboring pixels are pixel above, below and the other side of the selected pixel in the two dimension array.** The edge detecting data **corresponds to the array of pixels**)

after detection of the edge pixel and determines whether or no the pixel corresponding to the center of the filter is the characteristic point (**col.14 lines 1-10, the decision block compares the selected pixel which is located at the center of the four nearest neighboring pixels, and determine whether the central pixel is an edge pixel or not.** The characteristic point **corresponds to edge pixel)**

As to claim 3, Peregrim teaches the filter is applied to each edge pixel at the time of comparing and the edge element to which the filter has been applied is defined as the characteristic point when the filter value indicating the edge pixel coincides with the edge pixel of the edge detecting data at more than two places (**col.14 lines 1-10, Decision block 186 checks the selected pixel and its four nearest pixels. If all those pixels are 0, the selected pixel is removed from further consideration as an edge at processing block 190 and the next pixel is selected. If any one of the four nearest neighbor pixels is other than 0, (i.e., an edge) processing block 188 retains the selected pixel for further processing as a possible edge.** The edge pixel corresponds **to the selected pixel;** the edge pixel of the edge detecting data corresponds to **one of four neighboring pixels).**

As to claim 4, Peregrim teaches the pattern to be extracted is a pattern in which the edges form an angle larger 90° and smaller than 180 (**col.13 lines 36-47, Decision block 156 determines if the absolute value of the difference of the angles A1 and A2 computed at processing blocks 152 and 154 is greater than 45°. It will be recalled that A1 and A2 reflect the angle of an edge at the selected pixel computed two different ways. If the difference is greater than 45°, the selected pixel is not indicated as a possible edge. Otherwise, the pixel is set to 1 at processing block 158).**

As to claim 5, Peregrim teaches the filter is a filter of 3x3 pixels, with adjoining four pixels (excluding the center) being the filter value indicating the edge pixel and other adjoining four pixels being a filter value indicating the non-edge **pixels (col. 14 lines 1-10, Peregrim specifically teaches a decision block 184 that compare a selected pixel and its four nearest neighboring pixels to determine whether the selected pixel an edge pixel or not. The four nearest neighboring pixels are pixel above, below and the other side of the selected pixel in the 3 by 3 two dimension array. If all those pixels are 0, the selected pixel is removed from further consideration as an edge at processing block 190 and the next pixel is selected. If any one of the four nearest neighbor pixels is other than 0, (i.e., an edge) processing block 182 retains the selected pixel for further processing as a possible edge).**

As to claim 6, Higure teaches the characteristic region defining unit **(Drawing 3, Drawing 6, claim 1, page 18 [0029]-[0031),**the characteristic region defining unit **corresponds to the seek-area setting out- means)** divides the image into two or more regions having a prescribed number of pixels**(see Drawing 3,)** and defines as the characteristic region the region in which the number of characteristic points exceeds a specific threshold value (**claim 1,** the characteristic points **correspond to characteristic quantity of the picture. An edge detection result preferred as characteristic quantity. As the characteristic quantity, pixel value distribution T given by equation 1 can be used. The value of T is smaller than certain default value T_{th} ([0029]-[0031]).**

As to claim 7, Higure teaches the characteristic region defining unit computes the average value of the edge gradient of pixels contained in each the two or more regions (**[0029]-[0031], An edge detection result preferred as characteristic quantity. As the characteristic quantity, pixel value distribution T given by equation 1 can be used**) and defines as the characteristic region the region in which the average value is high **(([0029]-[0031], the value of T is given by**

$$T = \sum_i |a_i - A|$$

where ai and A are the pixel value and the average pixel value in template candidate respectively).

As to claim 8, Peregrim teaches the image data acquiring unit acquires the first image data indicating the first image(**Fig.2, element 22A, the non coherent integrator 22A acquires and analyze a reference image that come from target designator 119 (Fig.1))** and the second image data indicating the second mage(**Fig.2, element 22B, the non coherent integrator 22B acquires and analyze a radar scene image that come from the Synthetic Aperture Radar (SAR)),** and which further comprises a region comparing unit to compare the pixel in the characteristic region with the pixel in the second image(**Fig.2 element 42, Edge temple correlator, the details of the processing performed by edge template correlator 42 (FIG. 2) to match the template to target area image formed by SAR 18B (FIG. 1) are shown in FIGS. 8A and 8B);**

However it is noted that Peregrim does not specifically teach the characteristic region defining unit defines the characteristic region in the first image;

On the other hand the image processing device which performs alignment processing between two or more pictures which taken at almost same composition by a different photographing condition of Higure teaches a characteristic region defining unit (**Drawing 3, Drawing 6, claim 1, page 18 [0029]**, the characteristic region defining unit **corresponds to the seek-area setting-out means).**

As to claim 13, Peregrim teaches the image data acquiring unit acquires the first image data representing the first image and the second image data representing the second image **(Fig.2, elements 22A and 22B, the non coherent integrator 22A and 22B acquires and analyze a reference image and a radar scene image that come from target designator 119 (Fig.1) and the Synthetic Aperture Radar (SAR) respectively)**, and which further comprises a region comparing unit(**Fig. 2 element, the Edge Template correlator**) to compare the pixel in the characteristic region extracted in the first image with the pixel in the characteristic region and its neighboring regions extracted from the second image (**col.7 lines 13-16, reference template generator 34 uses the confirmed edge map to create the template it passes to on-missile processor 40 where it is compared to images formed by SAR 18B by edge template correlator 42).**

However it is noted that Peregrim does not specifically teach the characteristic region defining unit defines the characteristic region for the first image and the second image respectively,

On the other hand the image processing device which performs alignment processing between two or more pictures which taken at almost same composition by a different

photographing condition of Higure teaches the characteristic region defining unit defines the characteristic region for the first image and the second image respectively (**Drawing 3, Drawing 6, claim 1, page 18 [0029],** the characteristic region defining unit **corresponds to the seek-area setting-out mean).**

As to claims 14 and 18, Peregrim teaches an image data acquiring unit to acquire the first image data representing the first image and the second image data representing the second image**(Fig.2, elements 22A and 22B, the non coherent integrator 22A and 22B acquires and analyze a reference image and a radar scene image that come from target designator 119 (Fig.1) and the Synthetic Aperture Radar (SAR) respectively)**, said image data representing an image with pixels arranged in a dot matrix pattern **(col. 4 lines 62-64 col. 1 lines 24-26, the image might be represented in any of a number of ways. The SAR image is divided into a two-dimensional array of pixels, each represented by a digital word.** The dot matrix pattern **corresponds to the two-dimensional array of pixels. Since a dot matrix pattern represent digitalized or quantized image),**

an edge pixel detecting unit to detect the edge pixels of the image according to the first image data and the second image data**(Fig. 2 element 28 and 30, col.6 lines 65-68, col. 7 lines1-5, Fig. 2 shows local edge detector 28 and global edge detector30. Thus, the two edge detector detects the edge pixels of the reference image. The edge pixels of the radar scene image are detected in the Edge template correlator, and then compared to with the edges of reference image (col. 19 lines 20-25),**

a characteristic point extracting unit (**Fig. 2 element 32: edge extractor**) to extract the characteristic point in the first image(**Fig. 2 element 32, the edge extractor32 extract and output edge pixels of the reference image**) and the characteristic point in the second

image(**Fig. 2 element 42, col.19 lines 20-25, the edge template correlate extract edge pixels from the target image and then compare with the edges of the reference image**) when a pattern formed by the detected edge pixels (**Fig. 2 element 32, col.13 lines 48-58, the output of edge extractor 32 (FIG. 2) consists of an array of pixels denoted EEB(i,j). Each pixel has a value of either 1, indicating an edge, or 0, indicating no edge. Thus, the edge extractor 32 generates a pattern of 0 and 1 as output)**and their neighboring pixels(**col.13 lines 59-67, col.14 lines 1-10, Peregrim specifically teaches a decision block 184 that compare a selected pixel and its four nearest neighboring pixels to determine whether the selected pixel an edge pixel or not)** is similar to a prescribed object to be extracted**(Fig. 2 element 22B,col.17 lines 16-20**, **the output image of the non-coherent integrator 22B is compared to the output of the reference template generator using edge template correlator 42 to determine the best match between the template to target area image formed by SAR 18B.** The prescribed object to be extracted **corresponds to target area image formed by SAR 18B),**

an arrangement pattern data creating unit to create the arrangement pattern data which indicates the arrangement pattern based on the extracted characteristic point in the first image (**FIGS. 4A, 4B, 4C and 4D are masks used in the processing performed by the local edge detector of FIG.2. Thus, the masks crate pattern based on the extracted characteristic point in the reference image);**

However it is noted that Peregrim does not specifically teaches “a characteristic region defining unit to reference the thus created arrangement pattern data and define as the characteristic region the region in which the characteristic point in the second image approximately coincides with the arrangement pattern;"

On the other hand Higure teaches a characteristic region defining unit to reference the thus created arrangement pattern data and define as the characteristic region the region in which the characteristic point in the second image approximately coincides with the arrangement pattern number (**Drawing 3, Drawing 6, claim 1, page 18 [0029],** the characteristic region defining unit **corresponds to the seek-area setting-output means.** The extracted characteristic points **correspond to characteristic quantity of the picture. An edge detection result preferred as characteristic quantity ([0029]. Picture compensation means which amends a picture based on a detected corrected parameter so that an object position of each picture may be in agreement).**

As to claim 15, Peregrim teaches the arrangement pattern data is the data which specifies the relative position of the characteristic point(**FIGS. 4A, 4B, 4C and 4D are masks used in the processing performed by the local edge detector of FIG.2. Thus, the masks create pattern based on the extracted characteristic point in the reference image. The masks in FIGS. 4A, 4B, 4C and 4D are applied sequentially at each window location.** The relative position of the characteristic point corresponds to **the location of each window).**

As to claim 17, Peregrim teaches A characteristic region extracting program which temporarily stores image data **(col.4 lines 30-35, a computer implementing image processor with processor40 that includes a storage unit. The program runs in a general purpose digital computer)** representing an image in a prescribed storage medium and extract a characteristic region from the image **(col. 7 lines 25-30, the program includes global and**

local edge detection and extraction using a group of computer software instructions) said program allowing a computer to realize,

Regarding the remaining claim limitations, all claimed limitation are set forth and rejected as per discussion for claim 1.

Regarding claim 19 all claimed limitation are set forth and rejected as per discussion for claims 14 and 17.

6. Claims 9-11 are rejected under 35 U.S.C 103 as being unpatentable over Peregrim et al.(hereafter Peregrim), US patent No. 5027422, published 25/06/1991, in view of Higure Masaki (hereafter Higure), Japanese Patent Publication No. 11-185018, published on 07/09/1999, further in view of Lin et al. (hereafter Lin), US Patent Application Publication No. 20020102018.

As to claim 9, both Peregrim and *Higure do not specifically teaches* "the region comparing unit compares the gray level of the pixel in the characteristic region with the gray level of the pixel in the second image and extracts the region in the second image in which the difference between two is small" although Peregrim suggests each pixel is represented by a digital word which could take on a discrete number, say 256, of values representing an intensity level(col. 6 lines 15-20), and Peregrim also suggests a decision block 184 that compare a selected pixel and its four nearest neighboring pixels to determine whether the selected pixel an edge pixel or not(col.13 lines59-67, col.14 lines 1-10);

On the other hand Lin teaches the region comparing unit (**Fig.8 element 254**) compares the gray level of the pixel in the characteristic region with the gray level of the pixel in the second image (**Fig.8 element 254, [0130], for each sample region, the color information of the region may be compared with the color information of the template image. The term "image," as used herein, may refer to any of various types of images. An image may be a gray-level or color image [0078])** and extracts the region in the second image in which the difference between two is small **([0182], Lin teaches various methods for determining how close the color information of a target image region is to the color information of the template image. The methods include a match score method wherein the method indicates how close the color information of the region matches the color information of the template image. Thus, the higher the much score the smaller the difference between the target image and the template image).**

It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the system and method for measuring the similarity of multiple-color images and for locating regions of a target image having color information that matches of Lin (abstract) into the method of aligning two images of the same scene by matching features in a first image to features in a second image of Peregrim(abstract), because that would have allowed user of to Peregrim to characterize the colors of an image and to measure the similarity between multiple-color images based on the HSI values of the images pixels (Lin: Abstract)

As to claim 10, Lin teaches the region comparing unit (**Fig.8 element 254**) extracts the region for comparison which has the same size as the characteristic region in the second image **([0130], each region of the target image that is examined may be regarded as a window**

into the target image. This window may have various sizes. For example, the window size may correspond exactly to the size of the template image) and adds up the differences between the gray level of the pixel in the extracted region for comparison and the gray level of the pixel in the characteristic region **(Fig.8 element 254, [0130], for each sample region, the color information of the region may be compared with the color information of the template image. The term "image," as used herein, may refer to any of various types of images. An image may be a gray-level or color image [0078]))**, thereby defining the resulting summed value as the comparing value of the extracted region, and extracts the region in which the comparing value is small **([0182] Lin teaches various methods for determining how close the color information of a target image region is to the color information of the template image. The methods include a match score method wherein the method indicates how close the color information of the region matches the color information of the template image. Thus, the higher the much score the smaller the difference between the target image and the template image**).

As to calm 11, Lin teaches when the pixel in the characteristic region is the characteristic point (**Fig. 11, [0134], in step 452, a first-pass search through the target image may be performed in order to find initial color match candidate areas. In step 474 color characterization analysis for the target image region may be performed.** The pixel in the characteristic region corresponds **to the color match candidate areas)**, the region comparing unit extracts the pixel and its neighboring pixels which corresponds to the position of the characteristic point in the region for comparison**(Fig. 11, step 478 computes color spectrum differences between region and template image, and step 479 computes dominate color**

difference between region and template image), and, when these pixels are the characteristic points, adds the magnitude of difference between the gray level thereof and the gray level of the characteristic point in the characteristic region to the comparing value(**Fig. 11, [0169], in step 480, the difference values determined in steps 478 and 479 may be used to decide whether to add the region to a list of candidate match areas. For example, the color spectrum difference may need to be less than a threshold value in order for the region to be added to the list. Wherein image may be a gray-level or color image [0078])**.

7. *Claim 12 is rejected under 35 U.S.C 103 as being unpatentable over Peregrim et al.(hereafter Peregrim), US patent No. 5027422, published 25/06/1991, in view of Higure Masaki (hereafter Higure), Japanese Patent Publication No. 11-185018, published on 07/09/1999, further in view of Chia et al. (hereafter Chia), "Image stitching- comparison and new techniques", Springer-Verlag Berlin Heidelberg 1999.*

As to calm 12, however it is noted that Peregrim does not specifically teaches "a stitched image data creating unit to create the stitched image data which represents the stitched image formed by stitching together the first image and the second image superposing the region in the second image which has been extracted by comparison by the region comparing unit on the characteristic region" although Peregrim suggests a local edge detector and global edge detector (Fig. 2) to split an image in to two sections, and then use edge extractor to merge these image into one image, further Peregrim teaches edge template corrlelator unit that compare two images.

On the other hand Chia teaches a stitched image data creating unit (**Abstract, image merging step)** to create the stitched image data which represents the stitched image formed by stitching together the first image and the second image(**page 616, lines 16-18, Chia teaches the processes of image registration and image merging. Specifically Chia teaches several image stitching methods)**superposing the region in the second image which has been extracted by comparison by the region comparing unit on the characteristic region**(page 618 section 2.3 and section 3, Chia teaches different image comparison method that can be used to merge plurality of images).**

It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate different techniques of images stitching of Chia (abstract) into the method of aligning two images of the same scene by matching features in a first image to features in a second image of Peregrim(abstract), because that would have allowed user of to Peregrim to stitches the two aligned image of the same scene by selecting the optimal stitching method among the four stitching methods disclosed by Chia(Chia: page 621, section 4).

Conclusion

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Mekonen Bekele whose telephone number is 571-270-3915. The examiner can normally be reached on Monday -Friday from 8:00AM to 5:50 PM Eastern Time. If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor AHMED SAMIR can be reached on **(**571)272-7413**.** The fax phone number for the organization where the application or proceeding is assigned is 571-237-8300. Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished application is available through Privet PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217-919 (tool-free)

/MEKONEN BEKELE/
Examiner, Art Unit 2624
March 30, 2009

/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624